Building Permit Guides

The City of Louisville Design Criteria, Prescriptive Energy Code, and items listed below shall take precedence over requirements listed in the Building Guides of the Colorado Chapter of International Code Council.

- The City of Louisville has adopted the 2018 International Code series.

- Please reference the city's design criteria and prescriptive energy code available on the City of Louisville website located at www.louisvilleco.gov/government/departments/planning-building-safety/building-permit-guides .

- All decks are required to be designed by a structural engineer and shall include and engineer stamp and signature.

  Sec. 15.05.130. - Section R507.1 amended—Decks.
  https://library.municode.com/co/louisville/codes/code_of_ordinances
  Section R507.1 of the 2018 International Residential Code is amended to read as follows:

  > ***R507.1 Decks**. Wood-framed decks shall comply with the standards set forth in this section. For decks using materials and conditions not prescribed in this section, refer to Section R301. All decks that are structurally supported from an existing residential home shall be engineered by a structural engineer that is licensed with the State of Colorado.*

- Flat roof and patio covers may be required to be designed by a registered design professional. Section R802.4.4 of the 2018 International Residential Code read as follows:

  > ***R802.4.4 Rafter supports**. Where the roof pitch is less than 3:12 (25-percent slope), structural members that support rafters, such as ridges, hips and valleys, shall be designed as beams, and bearing shall be provided for rafters in accordance with section R802.6*

Building Guide

Colorado Chapter of the International Code Council

Single Family Residential Uncovered Decks and Porches

How to Use this Guide

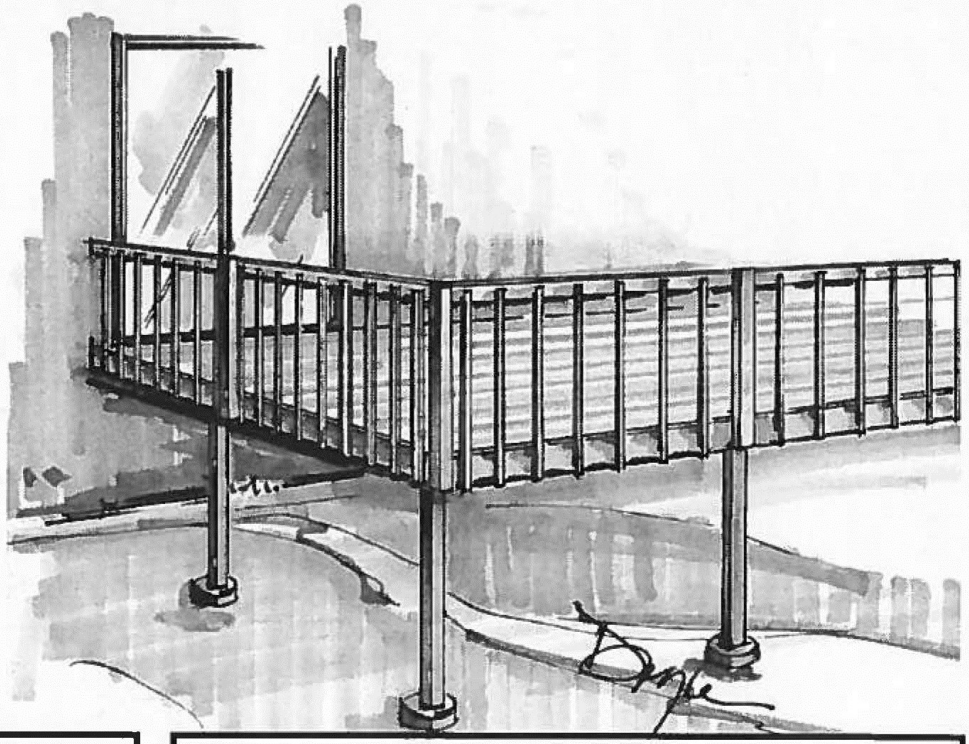
Provide two sets of plans, drawn to scale and complete the following (*hint: use graph paper with ¼" squares. Example: ¼" = 1'*): Check with your jurisdiction for additional requirements.

1. Complete this Building Guide by filling in the blanks on page two, and indicating which construction details will be used.

2. Provide 2 Plot Plans (site plan) showing dimensions of your project or addition and its relationship to existing buildings or structures on the property and the distance to existing property lines drawn to scale. See page 3.

3. Fill out a building permit application.

The majority of permit applications are processed with little delay. The submitted documents will help determine if the project is in compliance with building safety codes, zoning ordinances and other applicable laws.



The Colorado Chapter of the International Code Council is a professional organization seeking to promote the public health, safety and welfare to building construction. We appreciate your feedback and suggestions. To obtain a master copy of this building guide, please write to the Colorado Chapter of the International Code Council, P.O. Box 961, Arvada, CO 80001.
http://www.coloradochaptericc.org

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City of Louisville
COLORADO • SINCE 1878

www.louisvilleco.gov

Building Safety Division
749 Main St.
Louisville, CO 80027
303-335-4592 Phone
303-335-4588 FAX

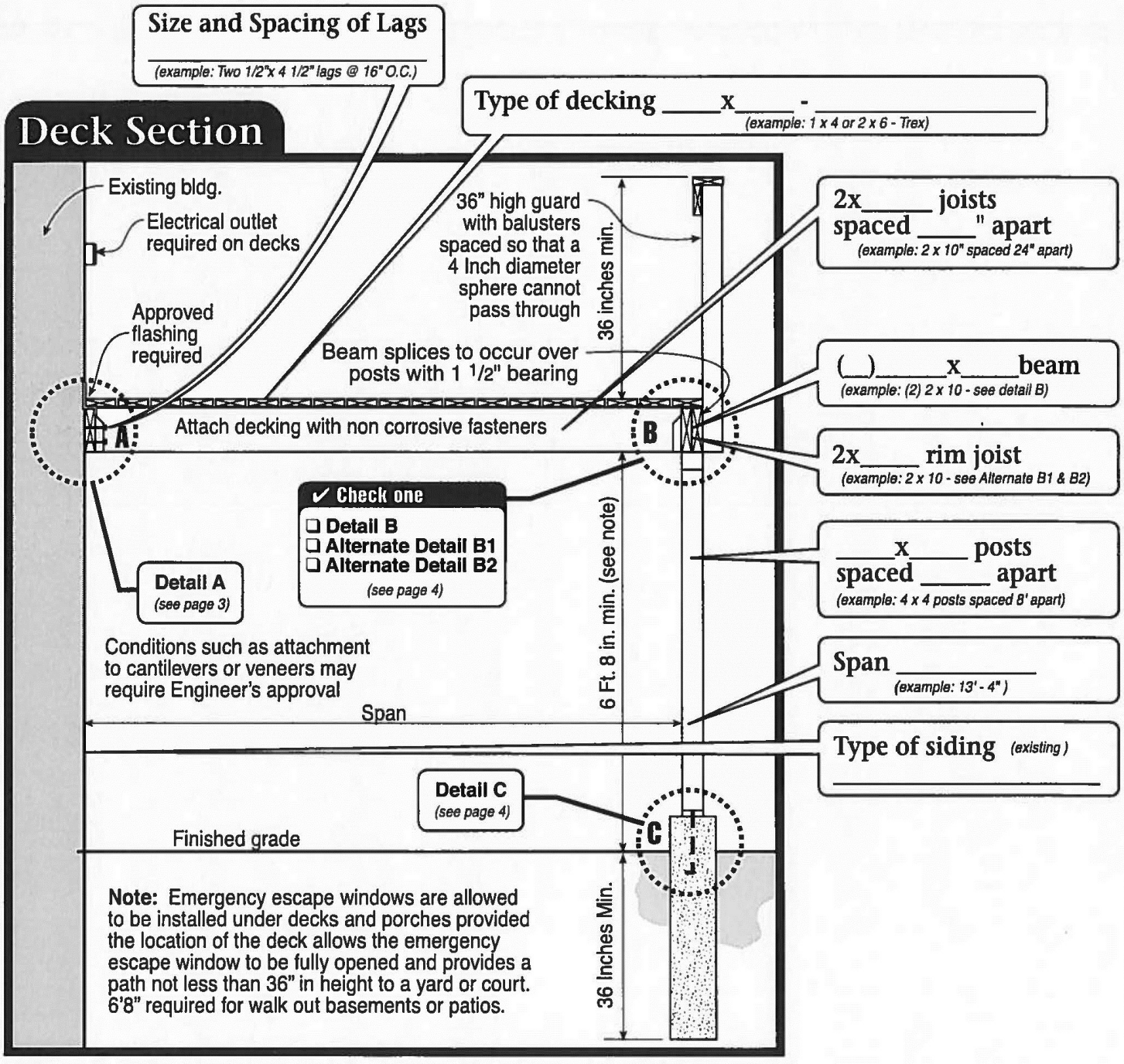
Single Family Residential Uncovered Decks and Porches

Directions

1. Fill in the blanks. Please print legibly.
2. Indicate in the check box which detail from page 4 will be used.

Address: _____

Deck Section



Note: A plot plan (plan view) showing the dimensions of your project or additions and its relationships to existing buildings or structures on the property must be included. In addition to project dimensions, your plot plan must also show other details such as post locations and spacing, joist and beam spans, and any other pertinent information not shown on the section drawing.

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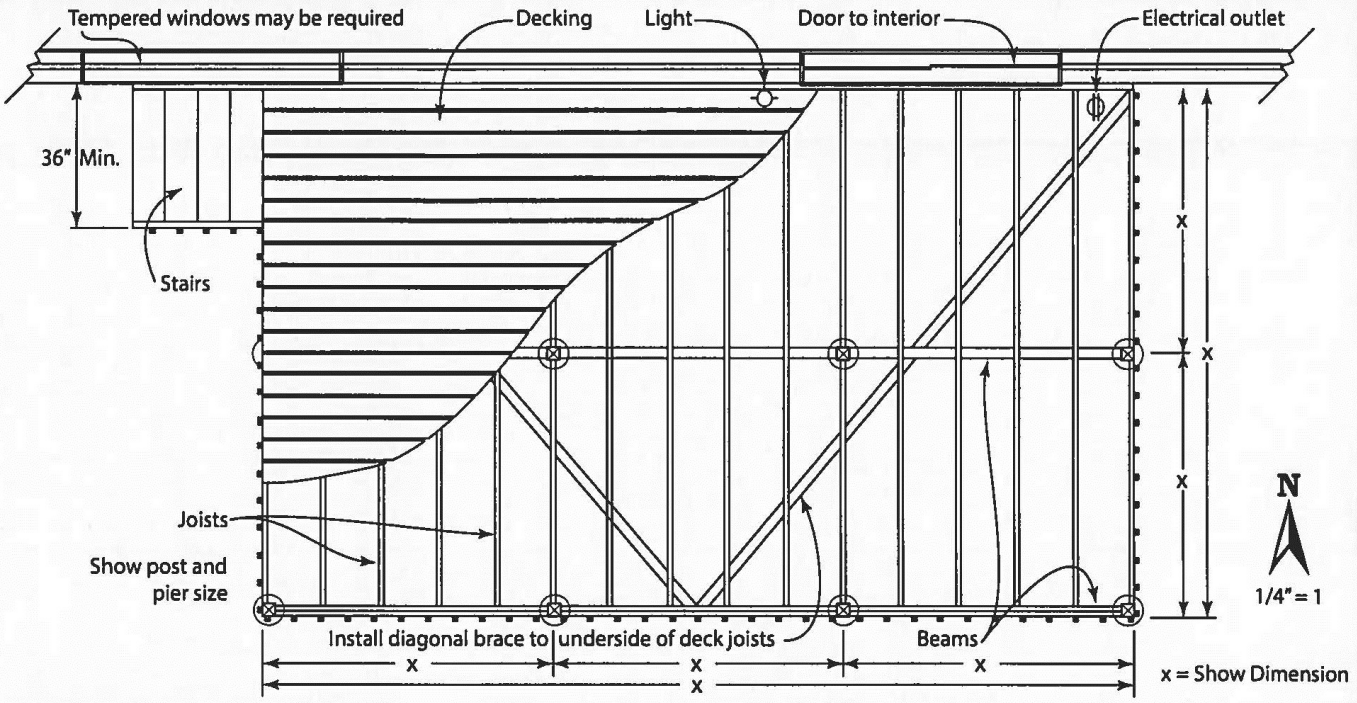
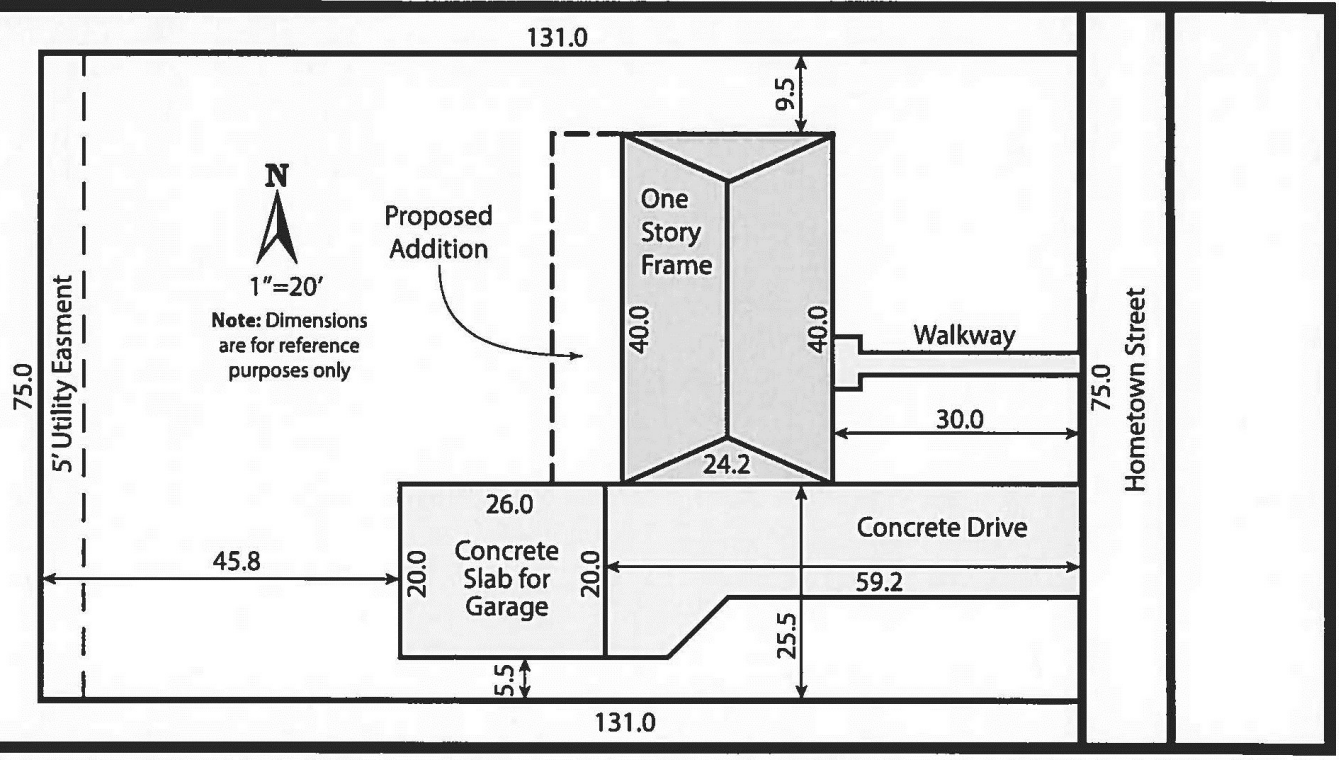
Plan View Example



Site Plan Example



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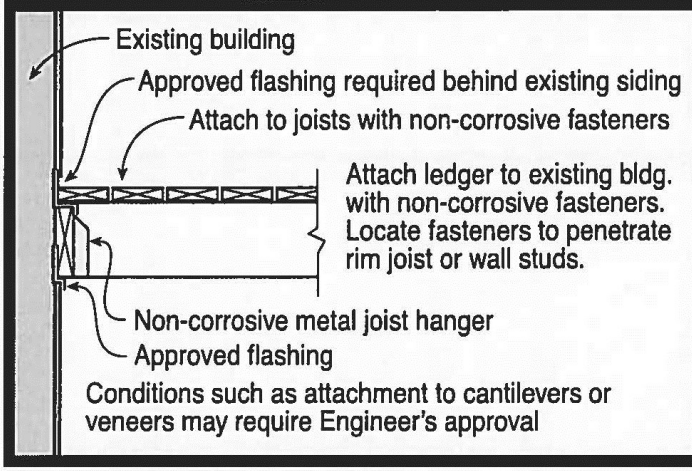
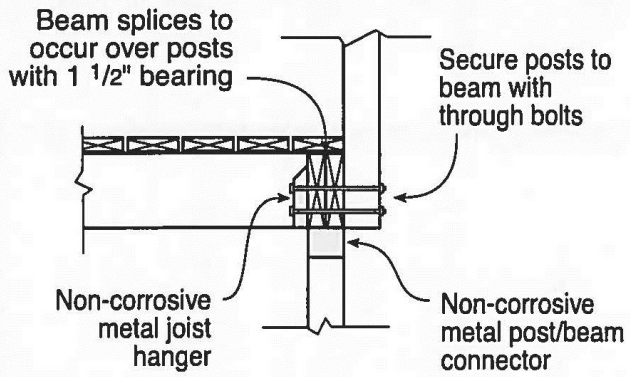
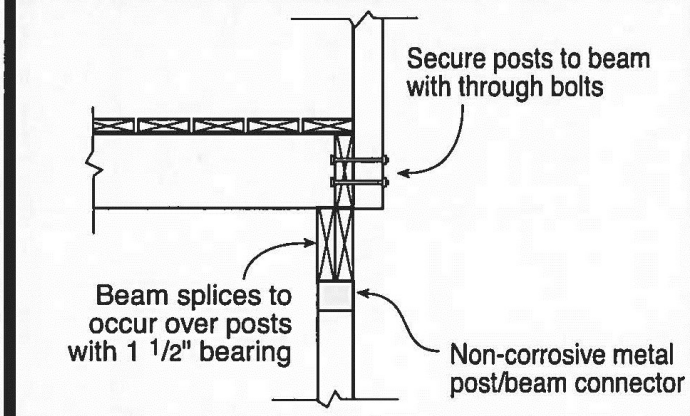
Detail A



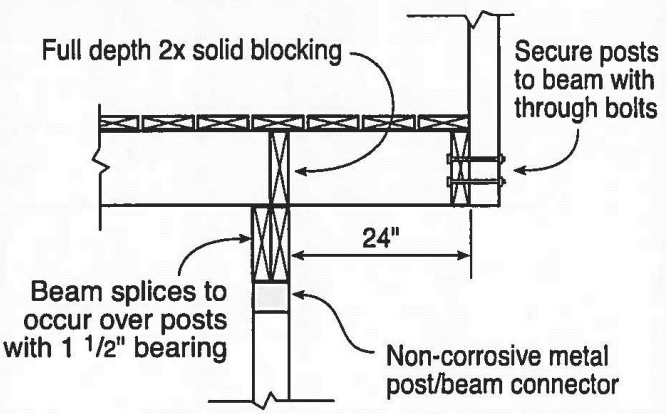
Detail B



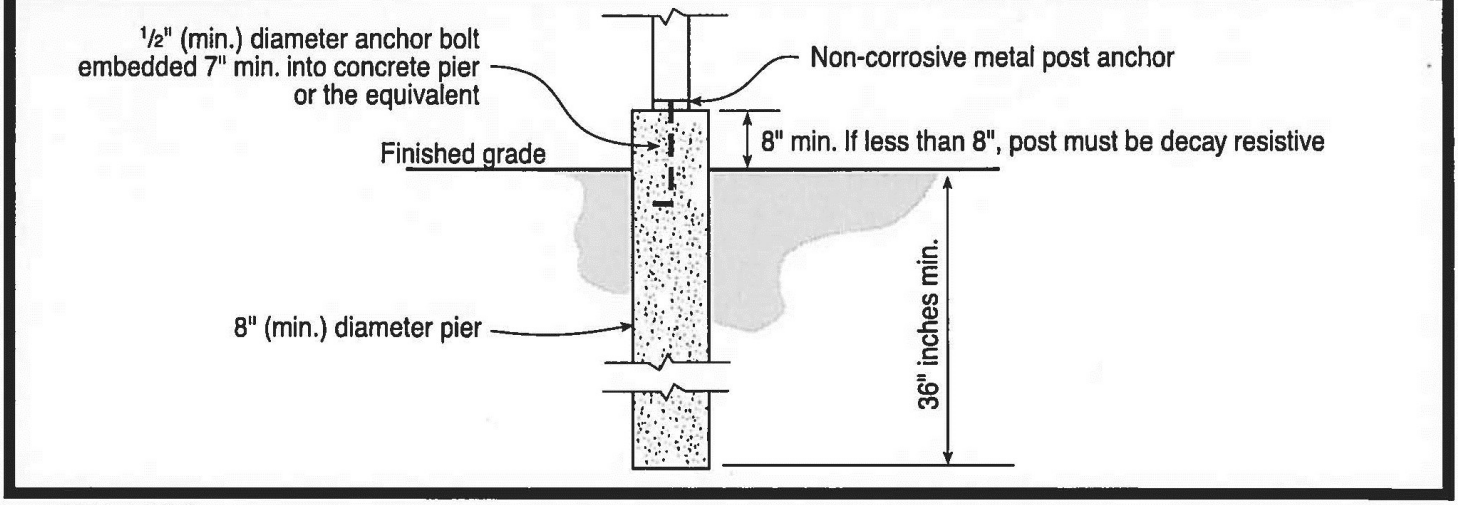
Alternate Detail B1



Alternate Detail B2



Detail C



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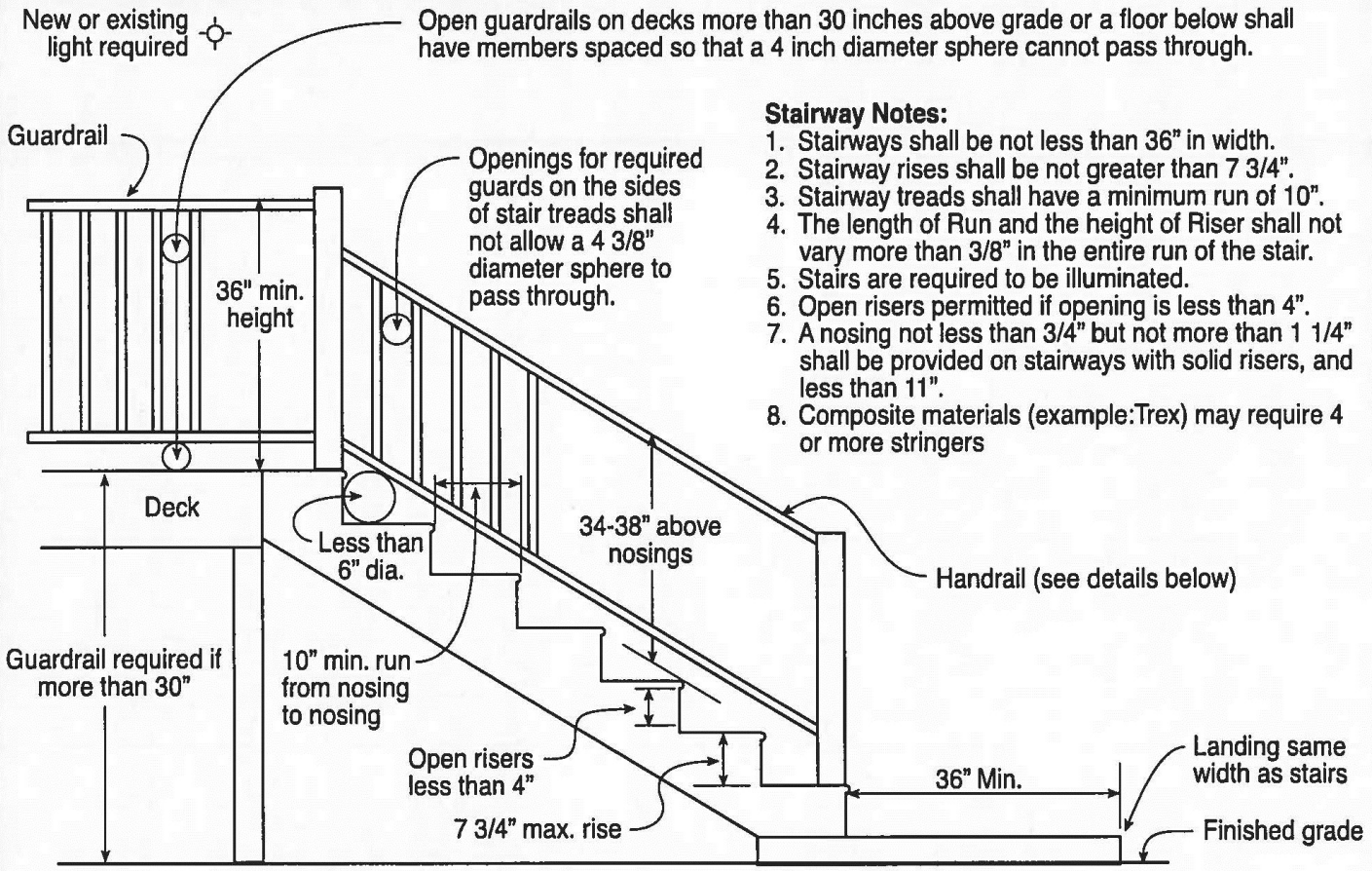
Single Family Residential Uncovered Decks and Porches

Stair & Handrail Specifications



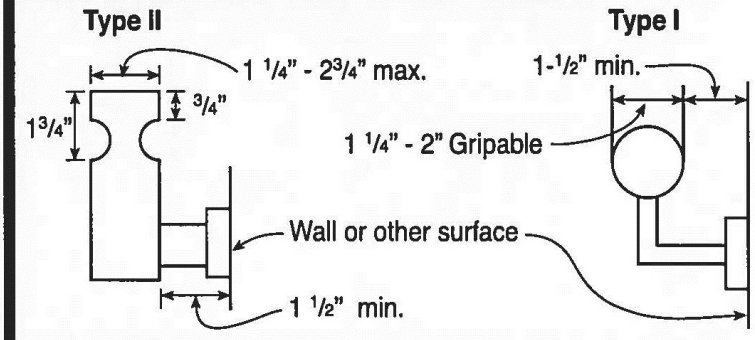
Stairway Notes:

1. Stairways shall be not less than 36" in width.
2. Stairway rises shall be not greater than 7 3/4".
3. Stairway treads shall have a minimum run of 10".
4. The length of Run and the height of Riser shall not vary more than 3/8" in the entire run of the stair.
5. Stairs are required to be illuminated.
6. Open risers permitted if opening is less than 4".
7. A nosing not less than 3/4" but not more than 1 1/4" shall be provided on stairways with solid risers, and less than 11".
8. Composite materials (example:Trex) may require 4 or more stringers

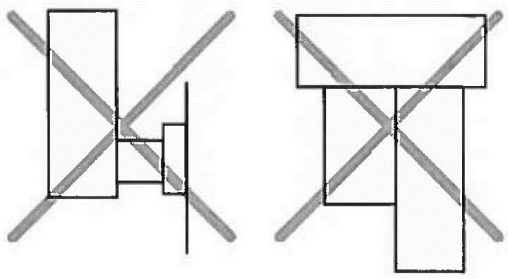
Handrail Notes:

1. Handrails shall be continuous on at least one side of stairs with 4 or more risers.
2. Top of the handrails shall be placed not less than 34 inches nor more than 38 inches above stair nosings.
3. The handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 1/4 inches in cross section for non circular handrails.
4. Handrails shall be placed not less than 1-1/2 inches from any wall or other surface.
5. Handrails to be returned to wall, post or safety terminal (per 311.7.8.2 IRC)

Acceptable Handrail Details



Unacceptable Handrails



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Deck Joist Spans

Table R507.5 DECK JOIST SPANS FOR COMMON LUMBER SPECIES[f] (ft.-in.)							
SPECIES[a]	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER[b] (inches)			SPACING OF DECK JOISTS WITH CANTILEVER[c] (inches)		
		12	16	24	12	16	24
Southern pine	2 x 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 x 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 x 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 x 12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas fir-larch[d], hem-fir[d] spruce-pine-fir[d]	2 x 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 x 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 x 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pine[e], red pine[e]	2 x 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 x 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4

For St: 1 inch=25.4 mm, 1 foot=304.8 mm, 1 pound per square foot=0.0479 kPa, 1 pound=0.454 kg

a. No. 2 grade with wet service factor

b. Ground snow load, live load=40 psf, dead load=10 psf, L/D=360

c. Ground snow load, live load=40 psf, dead load=10 psf, L/D=360 at main span, L/D=180 at cantilever with a 220-pound point load applied to end

d. Includes incising factor

e. Northern species with no incising factor

f. Cantilevered spans not exceeding the nominal depth of the joist are permitted

TABLE R507.6

DECK BEAM SPAN LENGTHS[a, b] (ft. - in.)

SPECIES[c]	SIZE[d]	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	2 – 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 – 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 – 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 – 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 – 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 – 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 – 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 – 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir-larch[e], hem-fir[e], spruce-pine-fir[e], redwood, western cedars, ponderosa pine[f], red pine[f]	3 × 6 or 2 – 2 x 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 × 8 or 2 – 2 × 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 × 10 or 2 – 2 × 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 × 12 or 2 – 2 × 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 × 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 × 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 × 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 × 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 – 2 × 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 – 2 × 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 – 2 × 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 – 2 × 12	13-11	12-1	10-9	9-10	9-1	8-6	8-1